

EXTRACTS FOR DPI-AGRICULTURE

2.	RESPONSES TO ISSUES RAISED ABOUT THE AMENDED PROJECT	2
2.3	AGRICULTURE	2
2.3.2	Agricultural Capability.....	2
2.3.4	Agri-Tourism	3
2.3.5	Water for Agriculture.....	5
2.3.6	Implications of Irrigation with Treated Water.....	6
2.3.8	Agricultural Land Removed for Biodiversity Offset.....	7
2.28	SOCIAL AMENITY	7
2.28.10	Stakeholder Engagement Plan.....	7



2. RESPONSES TO ISSUES RAISED ABOUT THE AMENDED PROJECT

2.3 AGRICULTURE

2.3.2 Agricultural Capability

2.3.2.1 Representative Comment(s)

The proponent should provide evidence in the rehabilitation plan that it is physically possible to return land from the disturbance area to previous or better production levels.

Department of Primary Industries – Agriculture

Response

GRL's proposed approach to rehabilitation of the Mine Area is based on well founded and proven rehabilitation results at other mine sites around the Hunter Region. The approach reflects best practice in the mining industry which GRL fully accepts must be adopted for the amended Project. The integration of rehabilitation activities within the overall mining program would be prioritised with the assistance of experienced personnel to assist GRL in delivering the high quality standard of rehabilitation proposed.

As discussed in Section 2.26.5.2 of this document, considerable emphasis would be placed upon the re-establishment of a soil profile on the top of the final landform that would be structured to provide both moisture retention in the subsoil and a well-drained and aerated topsoil layer well suited to plant growth. The direct transfer or stockpiling and subsequent transfer of the existing soils on site would enable replacement of this subsoil/topsoil profile that would invariably improve productivity compared to the natural, highly compacted soils. The use of an exotic pasture seed mix and fertiliser would also assist to improve the amount and quality of herbage available for cattle which in turn would result in improved weight gains for the cattle. These expectations are based upon the results of a number of trials undertaken in the Upper Hunter (Powells, 2015¹, ACARP, 2016², Outcross, 2015³ and Griffiths et al, 2015⁴). These papers describe how cattle feeding on exotic pastures sown on mine rehabilitated land experienced greater weight gain than cattle on native pasture on non-mined land. GRL would endeavour to replicate the excellent results from those various trials and similarly document the success of their program to return the disturbed areas within the Mine Area to productive grazing land.

¹ Powells, J. (2015), *The sustainability and productivity of grazing on rehabilitated mine land in the Hunter Valley. Mine Rehabilitation Conference Singleton* (The Tom Farrell Institute-University of Newcastle)

² ACARP (2016), *A study of Sustainability and Profitability of grazing on mine rehabilitated land in the Upper Hunter NSW* (ACARP Ref. No. 23053)

³ Outcross Pty Ltd (2015), *Acland Cattle Grazing Trial – report prepared for the New Hope Group and the Acland Pastoral Company*

⁴ Griffiths, N. McCormick L. and Nelson N. (2015), *Live weight gain by cattle grazing native pasture or improved pasture sown on rehabilitated mine land – Upper Hunter Study*

2.3.4 Agri-Tourism

2.3.4.1 Representative Comment(s)

The proponent should provide more information detailing why adverse impacts upon Hillview Herb Farm or local farmstays are considered “not likely”.

Department of Primary Industries – Agriculture

Response

GRL recognises that the Hillview Herb Farm is a well-established and well recognised destination. However, the evidence from elsewhere shows that despite the presence of a mine in the vicinity, it would continue to offer an agricultural / horticultural living experience and continue to attract visitors looking for that type of experience.

The Hillview Herb Farm is located approximately 2km from the toe of the western and northern amenity barrier and more than 2.5km from the nearest open cut pit, with the customers visiting the Hillview Herb Farm a little different to the mainstream visitor to Gloucester. As the AIS (Section 2.9.3) sets out, these customers are generally part of larger organised bus tour groups of 30-50 visitors which visit five or six different farms and tourism sites in the Gloucester area. These tours aim to provide a cross-section of rural production experiences for the visitors and the visitation sites are spread around the Gloucester area. The Hillview Herb Farm is the only property involved in these visits that is within the Locality of the proposed Mine Area.

With the successful management of noise, vibration and air emissions as identified in EIS Sections 4.2, 4.3 and 4.4 respectively and discussed in Section 2.3.1.3 of this document, views of any mining activity would only be possible to visitors to the Hillview Herb Farm during Years 7 and 8 of the mine’s operation. The presence of the mine during all other years of its operation would only be known to visitors to the Hillview Herb Farm as a result of being informed of its presence by the owners/operators of the Herb Farm. This fact is based upon the absence of any views of the activities in the Mine Area until and beyond that period. Section 2.31.2.3 and **Plate 2.31.3** of this document identify the view to the east from the Hillview Herb Farm and the very small section of the Mine Area in which activities would be visible within Year 7 and 8, activities which would occur at a distance of 3.6km to 5km from the Herb Farm and occupy a very minor arc ($<5^\circ$) in the vista to the east. It is also noteworthy that in terms of the promotional material used by the Hillview Herb Farm, it is the views to the west and the Gloucester Bucketts, and to the northeast towards Mount Mograni that are promoted.

The Noise Assessment predicted the likely mine-related noise levels at the Hillview Herb Farm would vary from 32dB(A) in Year 4 to 22dB(A) in Year 10. Such levels would hardly be discernible to visitors, particularly given the daytime background noise level of approximately 38dB(A) due to the proximity of the Herb Farm to The Bucketts Way and its associated traffic noise, the intervening North Coast Railway (at a distance of 0.8km) and the agricultural noise sources in the area. The Air Quality Assessment has predicted that the incremental TSP, PM₁₀, PM_{2.5} and deposited dust levels at the Hillview Herb Farm as a consequence of the Project would be minimal, ranging up to 6% for annual average TSP and PM₁₀, and $<3\%$ for annual average PM_{2.5} and deposited dust.

In light of the above, it is not expected that there would be a major impact on visitor's whole of tour experiences or on individuals on a single visit. As a consequence, adverse impacts upon the Hillview Herb Farm were assessed as "not likely".

It is also reasonable to expect that individual visitors that make their journey to the Hillview Herb Farm for a single experience based around the property, the offering and discussions with the proprietors, would be expected to focus more directly on the immediate surrounds, i.e. rather than identifying issues associated with the Rocky Hill Coal Project, and that most visitors would enjoy their experience in a manner similar to those in Carnarvon Gorge region. Discussions with a resort operator in the Carnarvon Gorge region noted that they provided an experience that was viewed as an oasis in the area because of its intrinsic qualities and that visitors did not particularly note issues relating to mining or the mining environment in that locality.

During the preparation of the EIS, GRL and its consultants investigated a number of regions throughout Eastern Australia where coal mining had seen considerable growth and where tourism was also a strong contributor to the same local economy. Investigations were conducted around tourism visitation volumes in the Gunnedah/ Boggabri area and in Central Queensland, more specifically in the Carnarvon Gorge and Arcadia Valley region. These findings are recorded in the AIS (Section 6.3.8). The investigations were undertaken at both a general visitation level as well as examining the impact on individual tourism operator businesses. In both regions, there was no decline in tourism visitation during the period of rapid expansion of the mining industry. To the contrary, there is evidence that overnight stays as measured by Destination NSW actually grew with the growth in mining activity in the Gunnedah area. Based on the observations throughout the broader Hunter Valley and the Mudgee area, it would be expected that in the Gloucester area, overnight stays would also show an increase as some of those overnights stays would relate directly to contractors, visiting sales representatives, and staff that are directly related to the mining activities. Further discussion relating to Tourism issues is provided in Section 2.30 of this document.

In the case of the Central Queensland region (Carnarvon Gorge/ Arcadia Valley), two business operators within close proximity to the extensive coal mining activity were consulted. One business provides resort style accommodation and the other, a Farmstay operation. Though both operators noted that initially they had concerns about potential perception impacts on their businesses, the improvements to infrastructure and services that resulted from the mining projects, made their businesses more accessible and a reduction in visitation volumes as a direct result of mining was not clearly visible. One operator (the resort) noted that the mine had actually brought new customer sets to their business.

In the example of Gunnedah, two local motel operators noted that the increase in prosperity within the town as a result of mining investment meant that they had a larger pool of visitors and that the key impact had been that more operators had entered the market. That evidence in itself suggests that commercial decisions about building accommodation would be based on solid market research.

Information provided by motel accommodation providers within Gloucester during the preparation of the Social Impact Assessment also supports the benefits of an increased pool of visitors, with the 2013 SEIA noting that in the interview with the Manager of The Bucketts Way Motel, 50% of their business was attributed to GRL, AGL and Yancoal, with a further 10-12% attributed to ancillary businesses related to mining. Separately, with AGL's

announcement of termination of its Gloucester Gas Project, the reduction in activity at Yancoal's operations in the post-2014 period and the reduced level of exploration activity, the proprietors of the Gloucester Country Lodge have advised of a substantial reduction in occupancy rates.

In the case of the Bed and Breakfasts enterprises discussed in Sections 2.9.3 and 3.7 of the AIS, it is expected that the establishment of the mine would increase visitor numbers for non site-based professionals that would generally be seeking this style of accommodation during the week, with the establishment of the mine likely to grow mid week visitation for this type of customer at a time when B&B's in Gloucester have historically been less likely to be occupied. The design of the mine as set out in the EIS would mean that, during the life of the mine, the impacts on the aesthetics of these sites would be minimal.

2.3.5 Water for Agriculture

2.3.5.1 Representative Comment(s)

... further detail on the impact on licensed and basic landholder rights water users is required to assess the impacts on the physical movement of water away from agriculture.

Department of Primary Industries – Agriculture

Response

As part of the AIS, GRL considered and recorded historical stocking rates and also looked at irrigation water licence utilisation. That analysis showed that many of the smaller licence holders were retaining the licences as an asset but not necessarily using the water to increase property production levels. **Table 2.3.1** shows the Water Access License held by GRL within the Avon Valley, noting that approximately 13% of entitlements available from the Avon River Water Source under the Water Sharing Plan for the Lower North Coast Unregulated and Alluvial Water Sources (1 997ML) is now held by GRL. However, in the preliminary analysis, it was evident that of the 12 available licences within the immediate locality, five had been inactive over the last decade and three were used only occasionally with limited volumes extracted. Hence, the quantity of water utilised historically for agricultural production is quite minimal.

Table 2.3.1
Water Access Licences held by Gloucester Resources Limited

WAL	Works Approval No	Entitlement Units
19512	20CA204385	116
19513	20CA204403	90
19524	20CA204351	27
19538	20CA204357	26
19543	20CA204371	8
Total		267
Source: AIS – Table 3.1		

Following the property aggregations and commencement of the amended Project, some 87% of the water resource would still be available for agricultural production. In addition to those

volumes, GRL has noted it will make available that component of its entitlement which is surplus to its own requirements for agricultural production until about Year 8. Beyond Year 8, GRL would not be able to provide any further surface water unless it reduces the storage capacity of some of the clean water storage dams on the rehabilitated landform or obtains additional WAL entitlements. As discussed in the EIS (Section 4.7.5.2 and shown in **Table 2.3.1**), GRL holds 267ML of surface water entitlement, with up to approximately 153ML required during the site establishment and construction stage and first year of operations. However, it is GRL's intention that the majority, if not all of this water would be sourced from existing or constructed storages in accordance with the Company's harvestable right, or groundwater inflows to the developing Avon Pit, with little, if any, required to be sourced from the Avon River or Waukivory Creek under its existing licence entitlements.

Beyond Year 1, it is expected that GRL would not require any water to be sourced from the Avon River and/or Waukivory Creek with the surplus water to be made available through agreements with other landowners to temporarily assign the water. It is also important to recognise that, as a large well-resourced business using the GRL-owned land not required for mining, the Speldon Partnership (GRL's lessee) has the capacity to maximise the potential benefit that can flow from the irrigation water available from the proposed water treatment plant and reduce their demand on the local river/creek system, thereby allowing more water to flow within the Avon River. Beyond Year 4 of mining operations, the amended Project itself would produce up to 2.5ML/day of treated water from its proposed water treatment plant, water which would be of a quality which satisfies the ANZECC limits for a slightly to moderately disturbed system and would therefore be suitable for irrigation and/or to maintain higher flows in the Avon River during some drought periods. The implications of the release of treated water from the Mine Area during drought periods are discussed in Section 2.29.4.10 of this document.

2.3.6 Implications of Irrigation with Treated Water

2.3.6.1 Representative Comment(s)

The proponent indicates that saline groundwater will be used to irrigate pasture and fodder crops. Regular testing of the groundwater prior to irrigation should be undertaken to ensure salinity levels remain within the recommended suitability levels for the relevant crops.

Department of Primary Industries – Agriculture

Response

Saline groundwater would **not** be used to irrigate pasture and fodder crops. As noted in the EIS (Section 4.7.4.4), water to be used for this purpose would be water treated in the on-site water treatment plant. The produced water would be of a quality suitable for both re-use (irrigation of rehabilitated areas and adjacent fodder and pasture crops) and discharge.

The treated water would have an electrical conductivity of less than approximately 400 μ S/cm, i.e. similar to naturally occurring flows within the adjacent Waukivory Creek and Avon River (and Oaky Creek) which are currently used for irrigation as well as stock and domestic purposes. As noted in Section 2.29.4.10 of this document, a program of water quality checks would be undertaken to ensure the treated water produced is consistent with the performance criteria for the plant and environment protection licence discharge criteria.

It should also be noted that a component of the groundwater which would report as inflows to the open cut pits, currently provides recharge to the alluvium, with conductivity values in the bores within the alluvium ranging from 1 200µS/cm to 5 000µS/cm at depths of 4m to 5.5m below ground level to 2 100µS/cm to 6 200µS/cm at depths of 8.5m to 9.0m below ground level. Water within the alluvium in turn, discharges to the Avon River and Waukivory Creek during normal to wet periods.

Testing of pastures and soil is already conducted on a regular basis by GRL's lessee as part of the existing property management system. The regime for the testing of the water being used for irrigation would be incorporated into the Water Management Plan for the amended Project and the pastures and soils that are being supported by such irrigation, would continue to be monitored.

2.3.8 Agricultural Land Removed for Biodiversity Offset

2.3.8.1 Representative Comment(s)

The proponent should clarify how much agricultural land is proposed to be removed for the purpose of establishing biodiversity offset areas.

Department of Primary Industries – Agriculture

Response

The AIS (Section 6.2.1) considers the agricultural land that would be removed for the purposes of establishing the Biodiversity Offset. The nominated Biodiversity Offset would include approximately 117ha of land currently used for beef grazing. However, the AIS (Sections 6.1.1 and 6.2.1) note that the grazing land to be removed from production as a consequence of the Biodiversity Offset Area is very steep. It is noted that approximately 90% of the entire Biodiversity Offset Area comprises Class 7 Land and Soil Capability and is only capable of supporting very low stocking rates.

2.28 SOCIAL AMENITY

2.28.10 Stakeholder Engagement Plan

2.28.10.1 Representative Comment(s)

The intended content of the proposed Stakeholder Engagement Plan to “minimise the potential adverse socio-economic impacts” should be described in more detail.

Department of Primary Industries – Agriculture

Response

GRL recognises that open and transparent communications with local organisations and people would engender a partnership approach to the amended Project that would deliver sustainable outcomes for the community over the life of the Project and underpin mine closure planning so that the post-mining use and community direction is aligned with community expectations.

The SIA sets out the three recommendations for ongoing communications and engagement with the community and various stakeholders, namely:

- Recommendation 1
Establish a Rocky Hill Coal Project Community Consultative Committee.
- Recommendation 2
Establish a Rocky Hill Coal Project Shop Front.
- Recommendation 3
Formalise existing strategies in a detailed Stakeholder Engagement Plan.

A Rocky Hill Coal Project Community Consultative Committee (CCC) would be formed, should the amended Project be approved, and replace the existing committee operating to provide for the exchange of information with community representatives with respect to GRL's coal exploration activities. The new CCC would be formed and operated in accordance with *Community Consultative Committee Guidelines for State Significant Projects, November 2016* prepared by the Department of Planning and Environment.

During the exhibition period for the EIS for the amended Project, GRL manned an Information Centre (or "shopfront") within Gloucester's main street to provide an opportunity for community members to access information, seek details on the amended Project and pose questions to GRL senior management, including GRL's Chief Operating Officer. The Information Centre has continued to be used on an intermittent basis as requested by various stakeholders. A similar facility or opportunity would be provided following commencement of the amended Project to provide a mechanism for the receipt of comments, access to information and community input.

A Stakeholder Engagement Plan is the third element in the program for ongoing communication and engagement. Section 6.2 of the SIA makes two important points in regard to the Stakeholder Engagement Plan.

- It should be a living document which is developed and actioned as part of the SIA process and not something that is simply delivered after the event.
- The plan should be developed with the input of the CCC and not predetermined without genuine engagement.

As described in Section 6.2 of the SIA, the Stakeholder Engagement Plan would be formalised following approval of the amended Project and based on the stakeholder engagement strategies used to date for the EIS and SIA processes. The CCC and others, including Council, would initially be consulted to map stakeholders and provide recommendations as to the requirements and most appropriate processes and methods for ongoing engagement and communication with the local community and other relevant stakeholders, with those processes and methods subject to ongoing review and evaluation as to their effectiveness and the promotion of stakeholder confidence.